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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,553	07/17/2003	Moshe Ein-Gal	1307EIN-US	9245

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EXAMINER

BELL, ALLISON S

ART UNIT

PAPER NUMBER

3737

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,553

Applicant(s)

EIN-GAL, MOSHE

Examiner

Allison S. Bell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 4, 5, 7, 11, 12, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Grunewald (5,224,468).

Grunewald discloses a first shockwave source device (P) formed with an aperture (Figure 2) through which a second shockwave source device (E) is adapted to transmit shockwaves, wherein said second shockwave source device is at least partially disposed in said aperture, said first shockwave source device is axisymmetric, said aperture is formed on an axis of symmetry of said first shockwave source device, the axis of wave propagation is generally coaxial with an axis of wave propagation of said second shockwave source device, and said first and second shockwave sources are arranged with respect to one another to focus on a common focus (F). Grunewald discloses at least one of said first and second shockwave source devices as comprising a piezoelectric shockwave source device (col 2, lines 55-56). Grunewald discloses an electromagnetic shockwave source device as being planar (Figure 2). Grunewald discloses a controller for first and second shockwave sources (col 4, lines 30-32).

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Grunewald discloses the generation of focused shockwaves (col 1, lines 6-10).

Grunewald discloses a shockwave generating system (excitable member and excitation device) as being shaped in the form of a three-dimensional curved surface.

Claims 16,17,18,and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Rattner (5,251,630).

Rattner discloses an excitable member (16) and an excitation device (2) both in the form of three-dimensional curved surfaces, a coil (4), a membrane (10) wherein said excitation device excites said excitable member to generate shockwaves that are focused on a focus (F) due to the shape of said excitable member and said excitation device and said excitable member and excitation device have the shape of a partial spheroid (col 7, lines 19-23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grunewald (5,224,468) in view of Heumann (4,796,613). The device of Grunewald describes the invention substantially as claimed except for the device having an axis of

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propagation of said first shockwave source device as being not coaxial with an axis of wave propagation of said second shockwave source device.

Heumann discloses a lithotripsy workstation comprising two shockwave generators that have different axes of propagation (col 3, lines 22-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have combined the shockwave generating system of Grunewald with the teaching of Heumann such that the two shockwave sources had different axes of propagation for the purpose of better targeting a concretion of interest.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grunewald (5,224,468) in view of Reichenberger (4,976,255). The device of Grunewald describes the invention substantially as claimed except for said first and second shockwave source devices being arranged with respect to one another to focus on different foci.

Reichenberger discloses a first shockwave source device for generating focused shock waves converging in a first focus and a second shockwave source device (therapeutic ultrasound source) converging at a second focus (col 2, lines 47-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have combined the shockwave generating system of Grunewald with the teaching of Reichenberger such that the device was capable of generating two different foci using said two shockwave source devices for the purpose of eliminating multiple calculi at any given time.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grunewald (5,224,468) in view of Krauss (5,113,848). The invention of Grunewald describes the invention substantially as claimed except for the device having a propagation medium and a membrane.

Krauss discloses a first shockwave source device and a second shockwave source device (Figure 1) adapted to transmit shockwaves. Krauss discloses the device as comprising a membrane (7) and a propagation medium (6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have combined the shockwave generating system of Grunewald with the teaching of Krauss such that the device contained a membrane and propagation medium for the purpose of having both shockwave generators as being capable of being in direct contact with a surface because the device would be correctly impedance matched with the desired surface.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grunewald (5,224,468) in view of Krauss (5,113,848) and Koehler (4,972,826). The modified invention of Grunewald describes the invention substantially as claimed except for the shockwave source devices as comprising a liquid-filled housing having compartments filled with different liquids.

Koehler discloses a shockwave-generating device comprising a liquid-filled housing having compartments filled with different coupling liquids.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have combined the modified shockwave generating system of Grunewald with the teaching of Koehler such that the first and second shockwave sources could be contained within different propagation media for the purpose of shaping the shock waves, i.e. creating wave propagation at varying speeds (Koehler, col 2, lines 30-39).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grunewald (5,224,468) in view of Zhong (5,800,365). The device of Grunewald describes the invention substantially as claimed except for the device comprising a controller that triggers said first and second shockwave source devices at different times.

Zhong discloses a shockwave generator controller that triggers a primary and secondary shockwave pulse (col 1, lines 6-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have combined the shockwave generating system of Grunewald with the teaching of Zhong such that a controller triggered said first and second shockwave source devices at different times for the purpose of first creating a cavitation bubble cluster near the target concretion and, second, producing a pulse that

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is substantially compressive to control and force the collapse of the cavitation bubble cluster towards the target concretion (abstract of Zhong).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allison S. Bell whose telephone number is 571-272-2768. The examiner can normally be reached on Monday - Friday, 8.30 am - 4.30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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